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In cooperation with State, Federal and Other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING AUGUST 19, 1950
(Twelfth Cotton Insect Survey Report for 1950)

"Destroy cotton stalks early - In certain areas of South Texas, State regulations require growers to destroy their cotton stalks early. During years when a thorough clean-up has been possible, boll weevil and pink bollworm infestations have been reduced the next year.

"Cotton growers throughout all areas of the State where the boll weevil is a menace should do everything possible to destroy cotton stalks early - the earlier the better. Early fall destruction of cotton stalks is one of the best and cheapest means of reducing damage from the boll weevil for the next season. As soon as the cotton is picked, growers should destroy the stalks. Destruction of stalks before frost cuts off the food supply and breeding place of the weevil. The longer the time between stalk destruction and frost, the greater the number of weevils that die of starvation. However, it will do good to destroy stalks at any time before frost--even a few days before frost will be worth the effort and expense.

"Early destruction of stalks is worth while when practiced by individual growers on a single field or farm, but it is much better when practiced on a community-wide or county-wide basis.

"With the boll weevil so abundant and widespread in so many areas this year, the importance of early and thorough stalk destruction by individuals and by communities as a preventive measure for the 1951 crop cannot be emphasized too much."
-- K. P. Ewing, August 21, 1950

Mr. Ewing's fine statement on the value and importance of the early destruction of cotton stalks in Texas cannot be emphasized too strongly or repeated too often not only in Texas but in every county where the boll weevil or pink bollworm occurs. Now is the time to begin to protect the 1951 cotton crop.

On many thousands of acres in Texas, cotton has been harvested and the stalks have been cut or plowed under. There are millions of acres within 200 miles of the Gulf Coast in Texas, Louisiana, Mississippi, Alabama, Florida, and Georgia where the cotton could be picked and the stalks destroyed by September 1 if the growers fully realized the value of this practice.

The Bureau of Census reported 446,572 bales of cotton had been ginned by August 16. Texas had ginned 435,136 bales but more than 11,000 bales had been ginned in Georgia, Alabama, Louisiana, and Florida. In each of these four States there are thousands of acres where the stalks should now be cut.

It would be well for those interested to emphasize the importance of early stalk destruction throughout the Gulf area. As cotton picking is completed elsewhere similar steps should be made to urge early stalk destruction.

Chemical defoliation of cotton will hasten maturity and early harvesting of the crop, protect it from insect damage this fall, and greatly reduce the number of boll weevils that will enter hibernation. Defoliation in August or September helps

greatly in preventing or reducing early infestations of the weevils in next year's cotton.

Although millions of acres of cotton are ready for stalk destruction, harvesting or defoliation, there are other millions of acres, largely in the northern half of the Cotton Belt, where the late maturing bolls should be protected from boll weevils, bollworms, and cotton leafworms. There are shortages of certain insecticides but other satisfactory materials are available. In many areas the cotton growers must use insecticides during September or lose much cotton that could be saved.

INSECTICIDES AND DEFOLIANTS AND EQUIPMENT FOR APPLYING THEM

Texas: C. B. Spencer, Agricultural Director, Texas Cottonseed Crushers Association, wired August 21: "New crop leafworm millers invading north, east, and west Texas. Poison situation more than just critical."

K. P. Ewing, Waco, wired August 24: "Farmers in western and northern Texas in desperate need for additional supplies of insecticides for control of leafworms and bollworms. Additional supplies for boll weevil also needed in northern Texas. Have conferred with Dr. H. G. Johnston and we urge that you continue to do everything possible to have insecticide companies immediately channel additional supplies insecticides to western and northern Texas."

Arkansas: Charles Lincoln, Extension Entomologist, reported on August 21: "Insecticides are tight and coming in by driblets. But they are still coming in and we're past the peak of usage. It looks like we'll win another close one."

South Carolina: The summary statement that accompanied the Cotton Letter issued by the Extension Service, Clemson College, on August 15 reports shortages of a mixture containing 3% gamma benzene hexachloride and 5% DDT in Abbeville, Anderson, Bamberg, Chesterfield, Greenville, Greenwood, Newberry, Oconee, Richland, Saluda, Spartanburg, and Union Counties; shortages of toxaphene dust in Abbeville, Anderson, Chesterfield, Newberry, Oconee, Richland, and Saluda Counties; shortages of chlordane mixtures in Anderson, Chesterfield, Oconee, and Richland Counties; shortages of calcium arsenate in Spartanburg County; shortages of aldrin spray in Saluda County; shortages of defoliants in Spartanburg County; and a shortage of hand and mule dusters in Oconee County.

Mississippi: E. W. Dunnam reported on August 18: "The supply of insecticides remains sufficient to go around and no one has had to go very long without some kind of weevil poison. The fact that some cotton is now rapidly maturing will relieve the situation a great deal. Airplane operators claim that the demand for plane service is now decreasing rapidly."

Alabama: Glynn B. Wood and Clifford D. Porterfield reported on August 19: "Reports indicate that farmers in all the 11 northern counties visited are getting enough insecticides although they do not always get their first choice. Some dealers have been selling large amounts of calcium arsenate because this is the only cotton insecticide available."

Excerpts from Weekly Cotton Weather Bulletin issued by the Weather Bureau, U. S. Department of Commerce, New Orleans, Louisiana, August 15:

Weather and Cotton over the Belt: Favorable for growth of crop and for spraying and dusting for insect control. Weevil infestation continues very heavy and damages in unpoisoned fields are mounting. Leaf and bollworms have been damaging in Oklahoma.

Texas: Cotton insect damage increasing especially eastern and north-central.

Oklahoma: Good progress. Application insecticides to cotton. Badly infested with bollworm, boll weevil, and leafworm; western migration weevil at peak with infestation worst in history; insect spraying general where poison available, but bollworm now causing serious damage squares, young bolls; leafworms have entirely stripped plants some fields western, northwestern counties.

Louisiana: Cotton continues make rank growth with weevil control difficult upper Delta; unpoisoned fields suffering heavy weevil damage.

Mississippi: Boll weevil control measures effective in reducing damage.

Tennessee: Weather favorable for controlling weevils.

Alabama: Weevil activity continues.

South Carolina: Open weather favored insect control.

North Carolina: Weather favorable for dusting boll weevils most of week; infestation still very heavy and causing considerable damage.

Arizona: Stinkbug infestation increasing Maricopa; bollworms some fields Pinal, Graham; control measures all sections with high bug counts.

New Mexico: Spraying, dusting for insect control cotton and sugar beets continuing.

BOLL WEEVIL

North Carolina: Boll weevils are very abundant in all parts of the State and infestation is high in both poisoned and unpoisoned fields. The average infestation in 67 poisoned fields was 69% punctured squares as compared with 53% last week. The infestation was less than 50% punctured squares in 17 fields and more than 50% of the squares were punctured in 50 fields. The 109 unpoisoned fields were infested at an average rate of 95% punctured squares, as compared with 86% last week. In 7 fields less than 75% of the squares were punctured. The infestation ranged from 76 to 90% in 4 fields and in 98 fields more than 90% of the squares were punctured.

South Carolina: The Extension Service Cotton Letter issued at Clemson College on August 15, stated: "Weather conditions for the State as a whole were very favorable last week for cotton insect control. Approximately 165,000 acres were reported poisoned in the 22 counties reporting. For the most part, poisoning has decreased in the lower Coastal Plain section due to the maturity of the crop and picking is now underway in many of these counties. In the Piedmont, most farmers are finding that the 4- or 5-day poisoning schedule is paying off. All cotton growers are urged to continue poisoning if they have young bolls (less than 3 weeks old) that can make cotton if they are protected from insects. In general, many farmers are tempted to stop poisoning too soon and thus lose the full benefits of early poisoning. This is especially true in the Piedmont where much of the crop is still far from safe from weevil damage.

"The percentage infestation for the week ending August 11th in poisoned fields in 22 counties was 49%, whereas in the unpoisoned fields in these counties it was 84%. To date, 82% of the cotton acreage in these 22 counties has been poisoned."

Alabama: The average boll weevil infestation in 77 fields in 11 northern counties was 41% punctured squares. The infestation ranged from 11% to 25% in 14 fields; from 26 to 50% in 42 fields; from 51 to 75% in 18 fields, and in 3 fields more than 75% of the squares were punctured.

Mississippi: Cotton is maturing very rapidly at this time; however, poison is being applied to some cotton that is still fruiting or the late set bolls are still susceptible to weevil attack. On account of many fields being poisoned, the boll weevil infestation decreased 4.4% from that of last week. No records of a year ago are available for comparison. The average infestation in 162 fields examined in 6 Delta counties was 27% punctured squares. The infestation ranged from 2 to 25% in 86 fields; from 26 to 50% in 59 fields; and in 17 fields more than 50% of the squares were punctured.

Louisiana: The average infestation in 686 fields in 16 parishes was 37% punctured squares as compared with 44% last week and 27% two weeks ago. The infestation ranged from 1 to 10% in 65 fields; from 11 to 25% in 190 fields; from 26 to 50% in 258 fields; and more than 50% of the squares were punctured in 173 fields.

Arkansas: Charles Lincoln, Extension Entomologist, reported on August 21: "All cotton in Southern and Western Arkansas is heavily infested with dusting necessary in all fields to continue to make cotton and to protect bolls. Showers continue to interfere with control operations.

"Local migration has begun in places in Northeastern Arkansas. There is no general migration except in extreme South Central Arkansas. It appears that heavy usage of insecticides is delaying general migration."

The average boll weevil infestation in 43 fields in 5 southeastern counties was 58% punctured squares as compared with 42% last week and 30% two weeks ago. The infestation ranged from 1 to 25% in 14 fields; from 26 to 50% in 8 fields; and more than 50% of the squares were punctured in 21 fields. In the examination of 28 fields in 3 southwestern counties the average infestation was 63% punctured squares as compared with 45% last week and 48% two weeks ago. The infestation ranged from 11 to 25% in 1 field; from 26 to 50% in 8 fields; and more than 50% of the squares were punctured in 19 fields. In Jackson, Monroe, Phillips, and Pulaski Counties the infestation in 316 fields averaged 16%. No punctured squares were found in 24 fields. The infestation ranged from 1 to 10% in 145 fields; from 11 to 25% in 82 fields; from 26 to 50% in 49 fields; and in 16 fields more than 50% of the squares were punctured.

Texas: The boll weevil continues to cause heavy damage in many fields in northern and eastern areas of the State. The average infestation in 184 fields in 48 counties was 30% punctured squares as compared with 40% last week. No punctured squares were found in 28 fields. The infestation ranged from 1 to 25% in 76 fields; from 26 to 50% in 32 fields; and in 48 fields more than 50% of the squares were punctured.

Oklahoma: The Oklahoma Crop and Weather Bulletin issued in Oklahoma City on August 15 states: "Cotton plants have made rank growth and conditions have been ideal for the development of bollworms, boll weevils and leafworms. Boll weevil migration into cotton fields of western Oklahoma is at its peak and weevil infestation is the worst of history. Spraying for insect control was general during

the week where insecticides were available but bollworms are now causing damage and several applications of poison may be necessary to protect squares and small bolls from damage. Leafworms are numerous in the western and northwestern cotton counties, with some fields entirely stripped of leaves."

The average infestation in 110 fields in 17 counties was 46% punctured squares. Weevils were found in 97 of the fields examined. The 13 fields in which no weevils were found were in Dewey, Custer, Beckham, and Washita Counties. Normally, weevils are not found in these counties until the end of the season. In the infested fields the infestation ranged from 1 to 25% in 19 fields; from 26 to 50% in 13 fields, and more than 50% of the squares were punctured in 65 fields.

COTTON LEAFWORM

Oklahoma: C. F. Stiles, Extension Entomologist, reported on August 19: "Cotton leafworms have been reported during the week from Atoka, Noble, Custer, Dewey, Ellis, Roger Mills, and Beckham Counties. It is thought that they occur in small numbers in every county in the State. We expect another outbreak of worms between now and September 5."

Arizona: Cotton leafworms were reported in Pima County August 15. The first leafworms in the State were reported in Graham County July 27. No serious infestations have developed.

Texas: Cotton leafworms continue to spread in northern and western areas and insecticides are being applied for their control in many fields. Further control for the leafworm will be necessary in some fields to prevent premature defoliation.

Arkansas: Charles Lincoln, Extension Entomologist, reported on August 15: "Cotton leafworms are abundant enough to require control in a few fields in Jackson, Lee, and Crittenden Counties, also in Dunklin County, Missouri. There are probably many more such infested counties. This does not look like a major outbreak, however."

Missouri: The first cotton leafworms were reported in Dunklin County on August 15, by Charles Lincoln, Extension Entomologist, Fayetteville, Arkansas.

Mississippi: No cotton leafworms were found or reported during the week.

MISCELLANEOUS INSECTS

South Carolina: At Dalzell W. J. Moore observed some click beetles feeding on cotton. About a dozen of the beetles were identified as Conoderus vespertinus (F.) of the family Elateridae (determined by R. H. Arnett). The larva of this beetle is the tobacco wireworm. The adult beetle is frequently found on cotton and occasionally occurs in sufficient number to cause noticeable damage to the cotton plants.

In the Eleventh Survey Report it was stated that 199 of the 213 lepidopterous larvae collected on cotton in Florence and Sumter Counties between July 27 and August 2 were the tobacco budworm Heliothis virescens (F.) and only seven were the bollworm or corn earworm, Heliothis armigera (Hbn.). We find that we overlooked mentioning another collection of 16 lepidopterous larvae or "bollworms" collected on cotton at Florence on July 26 by L. C. Fife. All were examined by J. G. Franclemont and found to be the tobacco budworm, Heliothis virescens (F.) This makes a total of 215 tobacco budworms collected from cotton between July 26

and August 2 as compared to 7 bollworms or corn earworms.

Mississippi: Lepidopterous larvae were reported in 14 of the 162 fields examined in 6 Delta counties at an average rate of 7% injured squares. Of the 14 fields infested only 4 had infestations above 10%.

Louisiana: Bollworms are beginning to cause heavy damage in some fields. Light infestations are reported in many fields.

Texas: On June 8 K. P. Ewing collected thrips on cotton on the Nehring-Leggot Farm in McLennan County that were determined by J. C. Crawford as belonging to the genus Frankliniella. In this genus there are several species of thrips that are injurious to cotton including the tobacco thrips, Frankliniella fusca (Hinds), and the flower thrips, Frankliniella tritici (Fitch).

Injurious infestations of bollworms are spotted in northern and western areas with control measures needed in some fields.

Oklahoma: Bollworms are present in damaging numbers in many fields over the State and insecticides are being applied for their control.

IRRIGATED COTTON OF THE SOUTHWEST

Arizona: Very little stink bug migration was observed in the Salt River Valley during the week. They were found in sufficient numbers in a few fields near seed alfalfa fields that are being harvested to require control. Bollworms were observed in some of the cotton fields in scattered areas; also a few salt-marsh caterpillars were observed. Mirid populations decreased during the week. Bollworms continue to cause damage in the Santa Cruz Valley and insecticides are being applied in some fields for their control. This insect is also a threat in some fields in the Safford Valley.

New Mexico: The principal insects in Eddy and Chaves Counties at the present time are cotton leafworms and bollworms which are occurring in damaging numbers in many fields. Control measures are general with satisfactory results. Some arsenicals have been used due to a shortage of other insecticides.

Texas: Bollworm infestation is on the increase in some fields in the El Paso Valley. No serious cotton leafworm infestations have developed due to the use of insecticides. Injurious hemipterous insect populations remain low.

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Is the Sweetpotato Leaf Beetle a Minor Pest of Cotton? -- On June 29, 1950 The Houston Seed Company, Birmingham, Alabama, mailed to this office 13 specimens of the sweetpotato leaf beetle, Typophorus viridicyaneus (Cr.) with the statement that they "were collected on the farm of L. M. Prince, near Hanceville, Blount County, Alabama. They were found eating the cotton leaves. Damaging stage is the adult." About the same time this beetle was received from Keith H. Smith of the Bolivar County Mississippi Department of Health, Cleveland, Mississippi. He collected it on cotton in Bolivar County on June 7, 1950. Although he did not write about this beetle, it is assumed that he thought it was causing injury to cotton. All of the beetles were identified by G. B. Vogt of the Division of Insect Identification.

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